

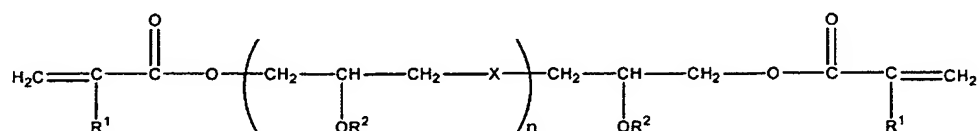
## CLAIMS

1. A photocurable composition comprising:

- at least one epoxy vinyl ester resin;
- 5 - at least one urethane acrylate resin;
- at least one non-silicone organic particulate filler exhibiting a mean particle size of less than 10  $\mu\text{m}$  and a specific surface of greater than 10  $\text{m}^2/\text{g}$ ; and
- at least one photoinitiator.

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2. The photocurable composition as claimed in claim 1, in which the epoxy vinyl ester resin corresponds to the formula:

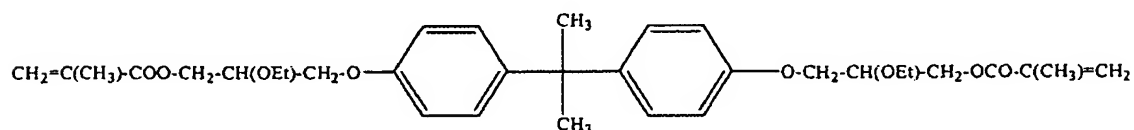
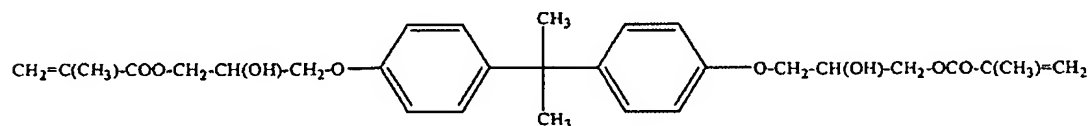


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in which:

- $\text{R}^1$  represents a hydrogen atom or a methyl group;
- $\text{R}^2$  represents a hydrogen atom or an alkyl group comprising from 1 to 3 carbon atoms;
- 20 - X represents a bisphenol A unit;
- n is an integer ranging from 1 to 10.

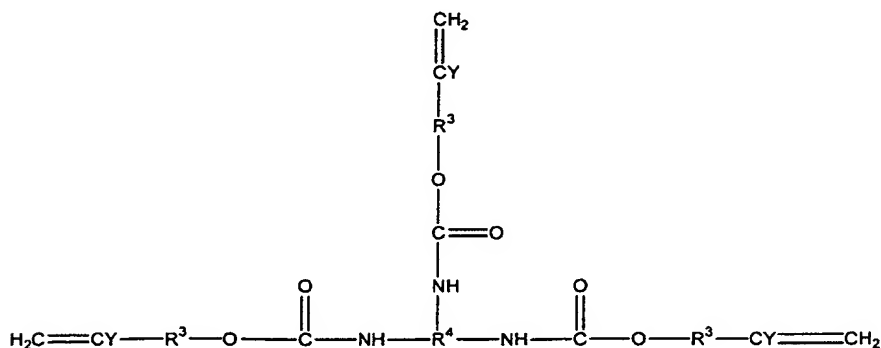
3. The photocurable composition as claimed in claim 1 or 2, in which the epoxy vinyl ester resin is chosen from the resins with the following formulae:



with Et representing an ethyl group.

4. The photocurable composition as claimed in any one of claims 1 to 3, in which the epoxy vinyl ester resin is present in the composition at a content ranging from 18 to 50% by weight with respect to the total weight of the composition.

5. The photocurable composition as claimed in any one of claims 1 to 4, in which the urethane acrylate resin corresponds to the following general formula:



in which

-  $\text{R}^3$  represents a group of formula  $-\text{CH}_2-(\text{CH}_2)_n-\text{O}-\text{CO}-$  with  $n$  being an integer equal to 1 or 2;

-  $\text{Y}$  represents H or  $-\text{CH}_3$ ;

-  $\text{R}^4$  represents an alkylene group comprising from 1 to 10 carbon atoms.

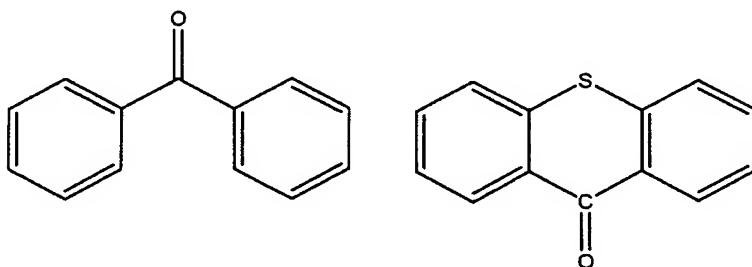
6. The photocurable composition as claimed in any one of claims 1 to 5, in which the urethane acrylate resin is present in the composition at a content ranging from 1 to 50% by weight with respect to the total weight of the composition.

7. The photocurable composition as claimed in any one of claims 1 to 6, in which the non-silicone organic particulate filler is chosen from particulate polymers of the group consisting of polyamides, polyacrylates,  
 5 optionally fluorinated polyolefins, and polysaccharides.

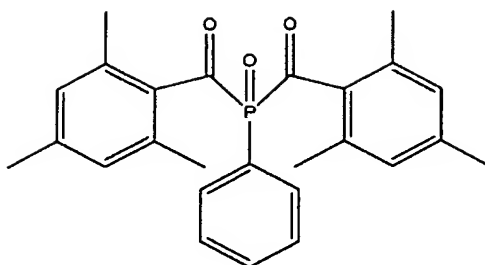
8. The photocurable composition as claimed in any one of claims 1 to 7, in which the non-silicone organic  
 10 particulate filler is present in the composition at a content ranging from 10 to 25% by weight with respect to the total weight of the composition.

9. The photocurable composition as claimed in any one of claims 1 to 8, in which the photoinitiator is chosen  
 15 from aromatic ketones and bisacylphosphine oxide compounds.

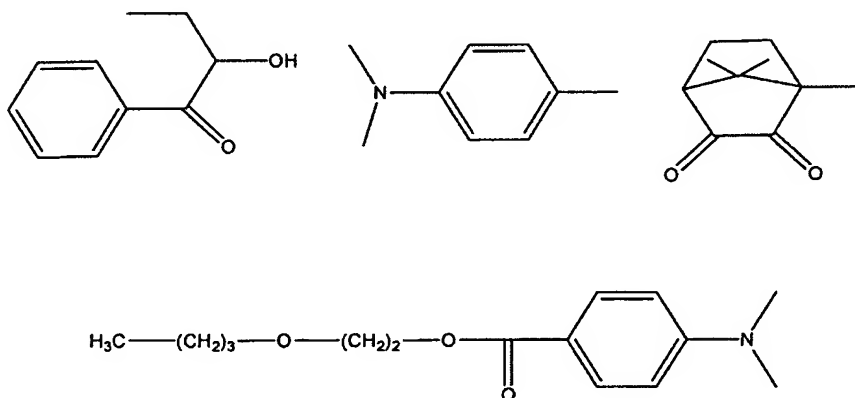
10. The photocurable composition as claimed in  
 20 claim 9, in which the photoinitiator corresponds to aromatic ketones corresponding to the following formulae:



25 11. The photocurable composition as claimed in claim 9, in which the photoinitiator corresponds to a bisacylphosphine oxide compound of following formula:



12. The photocurable composition as claimed in any one of claims 1 to 8, in which the photoinitiator  
5 corresponds to one of the following formulae:



13. The photocurable composition as claimed in any one of claims 1 to 12, in which the photoinitiator is  
10 present in the composition in a content ranging from 0.1 to 2% by weight with respect to the total weight of the composition.

14. The photocurable composition as claimed in any one of claims 1 to 13, additionally comprising at least one elastomeric compound and/or one elastomeric composition.

15. The photocurable composition as claimed in claim 14, in which the elastomeric compound is a compound chosen from (ethylene/vinyl acetate) copolymers or (hexafluoropropylene/vinylidene fluoride)

copolymers.

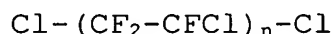
16. The photocurable composition as claimed in claim 14 or 15, in which the elastomeric compound and/or the elastomeric composition is (are) present in the composition at a content ranging from 20 to 60% by weight with respect to the total weight of the composition.

17. The photocurable composition as claimed in any one of claims 1 to 16, additionally comprising at least one polyester resin.

18. The photocurable composition as claimed in any one of claims 1 to 17, additionally comprising at least one oil.

19. The photocurable composition as claimed in claim 18, in which the oil is a non-silicone oil.

20. The photocurable composition as claimed in claim 18 or 19, in which the oil is an oil of formula:

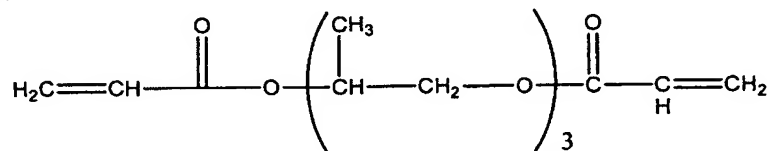


with n being an integer ranging from 3 to 4.

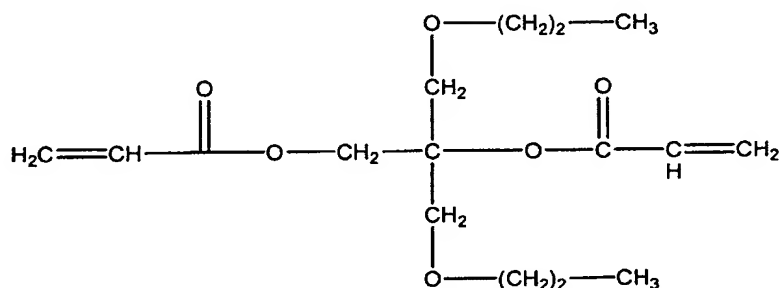
21. The photocurable composition as claimed in any one of claims 18 to 20, in which the oil is present in the composition at a content ranging from 0.5 to 3% by weight with respect to the total weight of the composition.

22. The photocurable composition as claimed in any one of claims 1 to 21, additionally comprising at least one reactive solvent.

23. The photocurable composition as claimed in claim 22, in which the reactive solvent is chosen from the solvents corresponding to one of the following formulae:



tripropylene glycol diacrylate (TPGDA)



- propoxylated 2-neopentyl glycol diacrylate (PONPGDA) and the mixtures of these.

24. The use of a photocurable composition as claimed in any one of claims 1 to 23 in the manufacture of a dental prosthesis preform and/or of a dental prosthesis pattern.

25. A dental prosthesis preform based on a photocurable composition as claimed in any one of claims 1 to 23.

26. A dental prosthesis pattern based on a photocurable composition as claimed in any one of claims 1 to 23.

27. A process for the preparation of a dental prosthesis pattern comprising the following steps:  
- a step of taking an impression, carried out by

applying an appropriate material to a buccal part to be provided with a prosthesis, so as to obtain an impression of said buccal part;

- a step of preparing a plaster model, consisting in  
5 pouring plaster into the impression prepared above;
- a step of modeling the desired pattern on the plaster model with the photocurable composition as defined in any one of claims 1 to 23;
- a step of photocuring said pattern;
- 10 - a step of separating said pattern, thus photocured, from the plaster model.

28. A process for the preparation of a dental prosthesis, comprising:

- 15 - the use of the process as claimed in claim 27 for the preparation of the pattern;
- a step of investing said pattern in a cylinder, on conclusion of which an investment mold of the dental prosthesis is obtained;
- 20 - a step of calcining said pattern;
- a step of filling the investment mold with a molten metal or metal alloy, followed by cooling, so as to solidify the metal or metal alloy;
- a step of destroying the investment mold, so as to  
25 release the dental prosthesis.